



PATENT
Attorney Docket No. 440446/Pall

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Bormann et al.

Art Unit: 1723

Application No. 09/806,322

Examiner: Krishnan S. Menon

Filed: June 5, 2001

For: BIOLOGICAL FLUID FILTER AND
SYSTEM

CLAIMS AS AMENDED IN RESPONSE TO THE
OFFICIAL ACTION MAILED AUGUST 5, 2002

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Amendments to existing claims:

1. (Amended) A filter device for processing a biological fluid comprising:
 - a housing having an inlet and an outlet and defining a fluid flow path between the inlet and the outlet;
 - a filter disposed in the housing across the fluid flow path, the filter comprising:
 - a first filter element comprising a porous fibrous leukocyte depletion medium having a CWST of at least about 70 dynes/cm; and
 - a second filter element comprising a porous membrane having a pore size of about 5 micrometers or less, said second filter element being disposed downstream of the first filter element;
 - wherein the filter is arranged to allow plasma to pass therethrough and substantially prevent the passage of leukocytes and red blood cells therethrough.
10. (Amended) A method for processing a biological fluid comprising:
 - passing a red blood cell- and leukocyte-containing plasma-rich biological fluid ~~through~~ into a filter device comprising a filter including a fibrous leukocyte depletion medium and a membrane; and
 - collecting, from the filter device, a filtered plasma-rich biological fluid substantially free of leukocytes and red blood cells.

11. (Amended) A method for processing a biological fluid comprising:

passing a leukocyte-containing plasma-rich biological fluid ~~through~~ into a filter device comprising a filter including a fibrous red blood cell barrier medium and a membrane; and

collecting, from the filter device, a filtered plasma-rich biological fluid substantially free of leukocytes.

12. (Amended) A method for processing a biological fluid comprising:

processing a biological fluid to provide a supernatant layer comprising a leukocyte-containing plasma-rich fluid, and a sediment layer comprising a red blood cell-containing fluid;

passing the leukocyte-containing plasma-rich fluid ~~through~~ into a filter device comprising a filter including a fibrous leukocyte depletion medium and a membrane; and

collecting, from the filter device, a filtered plasma-rich fluid substantially free of red blood cells and leukocytes.

13. (Twice Amended) The method of claim ~~10~~ 12 wherein the leukocyte-containing plasma-rich fluid comprises a leukocyte- and platelet-depleted biological fluid.

14. (Amended) A method for processing a biological fluid comprising:

depleting leukocytes and platelets from a red blood cell-containing biological fluid to provide a leukocyte- and platelet-depleted red blood cell-containing biological fluid;

processing the leukocyte- and platelet-depleted red blood cell-containing biological fluid to provide a supernatant layer comprising plasma and a sediment layer comprising red blood cells;

passing the supernatant layer through a filter device comprising a housing having an inlet and an outlet and defining a fluid flow path between the inlet and the outlet; and a filter disposed in the housing across the fluid flow path, the filter comprising a first filter element comprising a porous fibrous leukocyte depletion medium having a CWST of at least about 70 dynes/cm; and a second filter element comprising a porous membrane having a pore size of about 5 micrometers or less, said second filter element being disposed downstream of the first filter element; wherein the filter is arranged to allow plasma to pass therethrough and

substantially prevent the passage of leukocytes and red blood cells therethrough; wherein the filter ~~device~~ further depletes leukocytes from the supernatant layer and substantially prevents the passage of red blood cells therethrough; and

collecting plasma-rich fluid in a container downstream of the filter device, wherein the plasma-rich fluid is substantially free of red blood cells and leukocytes.

19. (Amended) The device of claim 3 ~~2~~, wherein the second filter element comprises a porous membrane having a pore size in the range of from about 0.3 to about 3 micrometers.